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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,293	08/26/2003	Toshio Goto	116182	4028
25944	7590	04/06/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			DOAN, JENNIFER	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 04/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,293

Applicant(s)

GOTO ET AL.

Examiner

Jennifer Doan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10 and 12-21 is/are rejected.
- 7) ☒ Claim(s) 8 and 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0803.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings, filed on 08/26/2003, are accepted.

Specification

3. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-4 and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Onishi et al. (U.S. Patent 6,347,174).

Regarding claims 1, 2, 18 and 19, Onishi et al. disclose (in figure 10) a broadband optical spectrum generating apparatus that generates a broadband optical spectrum, the broadband optical spectrum generating apparatus comprising a short pulse light source (17) that emits pulsed light at a short interval (column 18, lines 57-60 and column 19, lines 22-25); a broadband optical spectrum-generating optical fiber (10) that has a length of not greater than 50m and a non-linear coefficient of not less than $10 [W^{-1} m^{-1}]$ at a wavelength of the pulsed light emitted from the short pulse light source and converts the pulsed light input from the short pulse light source into the broadband optical spectrum (column 6, lines 26-48).

Regarding claims 3, 4, 21 and 20, Onishi et al. further disclose the broadband optical spectrum-generating optical fiber is a polarization maintaining optical fiber (column 11, lines 39-41) having a magnitude of chromatic dispersion of not greater than 2 (ps/km/nm) (column 6, lines 53-55).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 5-7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (as cited above).

Onishi et al. disclose all the limitations of the claimed invention except for the short pulse light outputting the pulsed light having a central wavelength of output pulse of 1556 nm and a mean output of not less than 20 nW as recited in claims 5, 6 and 17. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the short pulse light to output the pulsed light with a central wavelength of output pulse of 1556 nm and a mean output of not less than 20nW, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP § 2144.05).

Onishi et al. disclose all the limitations of the claimed invention except for the pulsed light having a width in a range of 10 to 100 femtoseconds and the broadband

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optical spectrum flat over a band of 1300 to 1900 nm as recited in claims 6 and 7.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the pulsed light and the broadband optical spectrum with the above features, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (MPEP § 2144.05).

9. Claims 9, 10 and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Onishi et al. (as cited above) in view of Okuno et al. (U.S. Patent 5,960,146).

Onishi et al. disclose all the limitations of the claimed invention except for the an optical spectrum extraction section having a tunable filter that varies a wavelength of transmitted light as recited in claims 9 and 10. Further more, this feature is taught by Okuno et al. Okuno et al. teach an optical extraction as a tunable filter that receives and extracts the broadband spectrum from the generation section (figure 42 and column 22, line 40- column 23, line 8). Such an element would advantageously and selectively filter the optical signals. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the Onishi et al. device with the optical extraction section (accordance with the teaching of Okuno et al.). Doing so would filter the optical signals to obtain the desirable signals.

Onishi et al. disclose all the limitations of the claimed invention except for the short pulse light outputting the pulsed light having a central wavelength of output pulse of 1556 nm and a mean output of not less than 20 nW as recited in claims 15 and 16.

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However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the short pulse light to output the pulsed light with a central wavelength of output pulse of 1556 nm and a mean output of not less than 20nW, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980) (MPEP § 2144.05).

Onishi et al. disclose all the limitations of the claimed invention except for the pulsed light having a width in a range of 10 to 100 femtoseconds as recited in claim 16. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the pulsed light with the above wide range, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (MPEP § 2144.05).

Allowable Subject Matter

10. Claims 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest a pulsed light generating apparatus further having a lens interposed between the short pulse light source and the broadband optical spectrum generating fiber and an extracted wavelength regulator that regulates the extracted wavelength in response to an electric signal.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aso et al. (U.S. Patent 6,522,818) and Goto et al. (U.S. Patent 6,618,531) disclose a short pulse-generating device.
12. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 08/26/2003, including the Okumo et al. patent relied on in the rejection above, have all been considered and made of record (note the attached copy of form PTO-1449).
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Doan

JD

March 30, 2004

Phan T. H. Palmer

**PHAN T. H. PALMER
PRIMARY EXAMINER**